Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Amendment of the Amateur Service	)	PR Docket No. 92-289
Rules Concerning the 222-225 MHz	)	
and 1240-1300 MHz Frequency Bands	)	

TO: The Commission

COMMENTS OF THE
WESTERN STATES VHF-MICROWAVE SOCIETY

The Western States VHF-Microwave Society (WSVMS)[1] hereby comments in favor of the Commission's proposed rules in the above-captioned matter. We wish to support--in the strongest possible terms--the continuation of the Commission's long-standing policy of setting aside a portion of each VHF-UHF amateur radio band for uses other than repeaters and auxiliary stations. The restoration of such a subband in the 1.25 meter band is of crucial importance for weak-signal and other experimental activities.

Over the past 80 years, radio amateurs have built a distinguished record of contributions to the technical state of the art through their experimental activities. For example, they have repeatedly demonstrated that long-distance communication is possible on very high frequencies and using modes of propagation that were considered useless for long-distance communication by the scientific community. That kind of amateur activity is clearly in the public interest. However, it cannot continue unless a portion of each VHF-UHF amateur band is reserved for non-repeater use on a national basis.

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[1] WSVMS is an association of radio amateurs in the western United States, Canada and Mexico. Approximately two-thirds of our 120 members live in Southern California. Our primary interest lies in the area of weak-signal experimentation and long-distance communication on the amateur bands above 50 MHz. Our main objective is to preserve and protect the right of radio amateurs to engage in experimental non-repeater communication on each VHF-UHF amateur band.

Weak-signal experimentation requires quiet, nationally standardized band segments, including repeater-free national calling frequencies and DX windows. Voluntary band planning by local repeater coordinating bodies cannot achieve this objective, not only because of the political realities of local repeater coordination but also because repeater councils cannot prevent uncoordinated repeaters from operating in band segments reserved for non-repeater use under voluntary agreements. The experience of our members amply illustrates this reality.

I. VOLUNTARY BAND PLANNING IS NOT THE ANSWER

The need for a protected non-repeater subband on 1.25 meters is a nationwide issue. However, that need is nowhere more clearly evident than in the region where most of our members live, Southern California. When the American Radio Relay League (ARRL) first proposed the restoration of a non-repeater subband at 1.25 meters (in RM-7869), a number of repeater owners and a Southern California repeater coordinating body filed comments in opposition to that proposal, arguing that such matters should be left for voluntary band planning by local repeater coodinators or "spectrum managers," as some such bodies prefer to call themselves.

In the view of the weak-signal community, our right of access to the amateur bands cannot be left to the vagaries of local repeater coordination. Voluntary band planning by repeater coordinators is not the answer, first of all, because it leaves the fox guarding the henhouse. There are few broadly representative "spectrum managers" in America today. Much more commonplace are repeater councils whose primary constituency--often their only constituency--consists of established repeater and auxiliary station owners. History has shown that weak-signal operators, amateur satellite enthusiasts and others who use

narrow-bandwidth modes rarely have a significant voice in these bodies. In fact, the spectrum needs of repeater owners and prospective repeater owners often directly conflict with the needs of weak-signal experimenters and other non-repeater operators. To allow repeater councils to decide how much of each amateur band is set aside for non-repeater uses is like allowing the land mobile industry to decide how much of the spectrum is set aside for broadcasting. Only the Commission is in a position to conduct the impartial public policy analysis that is required to make those decisions--particularly when the decision must be made on a nationwide basis rather than in a piecemeal fashion by many different local coordinating groups. By its nature, weak-signal experimentation is a nationwide and worldwide activity, not a local activity. Whether weak-signal operating is to continue should not be determined amidst the politics and intrigue of local repeater coordination. This is a national issue, requiring an impartial nationwide public policy determination by the Commission.

The very existence of the Western States VHF-Microwave Society is a testimony to the impossibility of securing a uniform, nationwide non-repeater subband if that decision is to be left up to each local repeater coordinator. As the Commission was made aware in the *Comments* filed by James Steffen and other WSVMS members in response to RM-7869, the 220 Spectrum Management Association (a Southern California repeater coordinating body) kept virtually the entire 222-225 MHz band for repeater use when 220-222 MHz was reallocated for non-amateur use. In fact, SMA restricted weak-signal activities to the bottom 10 kHz of the band--with a repeater input at 222.020 MHz! Repeater inputs were retained on the national calling frequency of 222.100 MHz and every other channel in the ARRL-recognized national weak-signal subband (i.e., 222.0-222.150 MHz).

Moreover, 220 SMA told the Commission in its RM-7869 *Comments* that amateurs

should be allowed to work out this problem without government involvement. But even with the threat of federal regulation hanging over their heads, the leaders of 220 SMA have been unable or unwilling to relocate repeaters out of the national weak-signal subband in the 15 months since ARRL's petition in RM-7869 was filed--and there is little hope that many repeaters will voluntarily relocate in the foreseeable future.

After some of our members attempted to negotiate with SMA on an individual basis, the Western States VHF-Microwave Society was formed last May to give weak-signal experimenters a strong, unified voice to negotiate with SMA and other repeater coordinating bodies in the Western United States. In fact, last summer SMA did convene an advisory committee that included two WSVMS representatives, and that advisory group met three times, ultimately agreeing upon 222.0-222.110 MHz as a weak-signal subband in Southern California pending FCC action.

However, there was apparently a misunderstanding between SMA's representatives and WSVMS' representatives concerning this temporary subband. Our understanding was that this 110 kHz segment was to be an interim weak-signal subband, an initial measure that would be implemented as soon as possible. We did not agree that 110 kHz was an appropriate size for a permanent, nationwide non-repeater subband--nor could we, given the fact that our members had voted overwhelmingly in favor of a 150 kHz nationwide weak-signal subband, and that weak-signal operators from coast to coast favor a subband of at least 150 kHz. We are surprised and disappointed that SMA has not implemented the advisory committee's recommendations, but to our knowledge, not one repeater has been relocated out of the nationally recognized weak-signal subband at this writing.

We understand that SMA did place the matter on the agenda of its January meeting--after the Commission launched this proceeding. Even then, SMA agreed only to

support a 110 kHz non-repeater subband in principle. SMA did not adopt any timetable for relocating repeaters out of the weak-signal subband. Moreover, SMA also adopted policies that give the first priority for any repeater channels that may become available higher in the band to former 220-222 MHz systems, not to repeaters now using 222.0-222.150 MHz! There is little likelihood that all of the former below-222 MHz systems can be reaccommodated soon; if we are to wait for voluntary repeater relocation to gain access to the 1.25 member band, we have a very, very long time to wait.

Furthermore, SMA has no enforcement powers. As the RM-7869 *Comments* filed by several repeater owners should make clear, the repeaters now operating below 222.150 MHz have no intention of relocating voluntarily. Some RM-7869 commenters likened weak-signal operators to "homeless persons living in a park" who want to take over their "home." Those comments are typical of the attitude that weak-signal operators have encountered among repeater owners ever since the first repeaters appeared on the VHF-UHF bands: repeater owners often think they own their frequencies. They are NOT inclined to allow weak-signal operators to use those frequencies voluntarily, even when a repeater is not in use. Our members often face harassment and seemingly malicious interference from FM stations when they attempt to use narrow-bandwidth modes (i.e., CW or SSB) anywhere in the nationally recognized 1.25 meter weak-signal subband.

In short, in the 15 months since ARRL petitioned for a non-repeater subband and SMA responded by calling for voluntary cooperation, SMA has not been willing or able to create even one repeater-free channel in Southern California in the nationally recognized weak-signal subband, nor does it have the legal authority to do so in the future.

II. VOLUNTARY COORDINATION CANNOT KEEP ANY BAND SEGMENT FREE OF UNCOORDINATED REPEATERS

Another problem that the Commission must consider in this proceeding is the reality that uncoordinated repeaters are now appearing wherever they are not prohibited by law. In the nation's major urban centers such as New York and Los Angeles, numerous uncoordinated repeaters have been placed on the air on frequencies set aside by voluntary band plans for other uses such as amateur television, packet, and even satellite communications. Even the fairest voluntary subband allocation plan by a repeater coordinating body cannot prevent this from occurring.

In fact, the Commission's rules have the effect of encouraging uncoordinated repeaters to locate in band segments set aside for weak-signal and other non-repeater activities. Part 97.205(c) protects coordinated repeaters from interference by uncoordinated ones, but it does not protect non-repeater operations from such interference. Thus, uncoordinated repeaters have an incentive to locate in band segments that are set aside for non-repeater use under voluntary local band plans. No repeater coordinating body can prevent this from happening in the absence of a federal regulation forbidding repeaters in a specific segment of each VHF-UHF amateur band.

III. WEAK-SIGNAL EXPERIMENTATION REQUIRES UNIFORM NATIONAL BAND SEGMENTS, NOT VARYING LOCAL SUBBANDS

By its nature, weak-signal experimentation is not a local activity. Our signals freely cross the jurisdictional boundaries of the various repeater coordinating bodies. We urge the Commission not merely to consider the unique problems of any particular region of the country such as Southern California, but instead to consider the national need for uniformi-

ty in weak-signal band segments. What is needed is standardized calling frequencies and band segments for weak-signal operation, segments that are not subject to the vagaries of local repeater coordination. The entire history of weak-signal experimentation on 1.25 meters illustrates why nationwide weak-signal subbands are needed.

In his separate *Comments* in this proceeding, WSVMS member Dr. Wayne Overbeck, N6NB, is placing in the public record a paper he published last year documenting the 60-year history of amateur experimentation on the 1.25 meter band. His paper traces the work of pioneering amateurs who proved that virtually every long-distance propagation mode that exists at lower frequencies also manifests itself at 222 MHz at certain times. Radio amateurs have communicated thousands of miles on 222 MHz by meteor scatter, aurora, moonbounce, troposcatter, over-water tropospheric ducting, and even by sporadic-E propagation. All of this experimental work required pre-arranged schedules (and much perseverance), using nationally standardized operating frequencies. That kind of experimentation simply cannot continue if weak-signal operators are assigned to inconsistent band segments--or no band segments at all--in various regions of the United States.

Because weak-signal experimentation has always required uniform national band segments, the Commission's traditional policy of reserving a portion of each VHF-UHF band for non-repeater use is clearly in the public interest. And it should be noted that what the Commission is now proposing for 1.25 meters is by far the *smallest* non-repeater subband ever established on any amateur band.

For comparison, one full megaHertz of six meters and two meters (25 percent of each band) and 5 MHz of the 70 centimenter band (17 percent of that band) are currently reserved for non-repeater use. Moreover, 500 kHz of the old 220-225 MHz band was reserved for non-repeater use. If the Commission were to set aside the same percentage of

the new 222-225 MHz band for non-repeater use, the new non-repeater subband would be 300 kHz in size, not the proposed 150 kHz. We realize that some repeater interests want to keep 100 percent of 1.25 meters for their own use and are unwilling to see other operating interests given even five percent of the band. However, there are also many in the weak-signal community, including some of our members, who feel that the proposed 150 KHz non-repeater subband on 1.25 meters is far too small.

IV. 95 PERCENT OF THE 1.25 METER BAND IS SUFFICIENT FOR REPEATERS

If the Commission sets aside 222.0-222.150 MHz for non-repeater use, that will leave 95 percent of the 1.25 meter band for repeater activities. It is our contention that other, more spectrum-efficient users should be given assured access to at least five percent of this band.

Every 1.25 meter repeater channel occupies 40 kHz, including a 20 kHz input channel and a 20 kHz output channel. In most cases, the repeater's control operator(s) insist on the exclusive right to use that 40 kHz band segment 24 hours a day, seven days a week. It has been our members' experience that even if a given repeater has been inactive for hours, the first sign of non-FM activity near its input channel will bring immediate protests. As noted earlier in these *Comments*, we have found sharing the nationally recognized weak-signal subband with repeaters to be very, very difficult: repeater owners routinely tell us to get off of *their* frequencies!

In fact, in Southern California--where the instant proposal has been most controversial--there are more than 900 repeaters listed in the *ARRL Repeater Directory*. Most of them are used only a very small percentage of the time--often far less than one hour per day--and by only a few individuals. In fact, many of these repeaters are closed--not avail-

able for general use by the vast majority of the 40,000 licensed radio amateurs in this geographic region. These repeaters usually remain unused, their control operators acting as silent sentinels who claim proprietary rights to valuable spectrum--denying its use to the majority of radio amateurs.

Under these circumstances, there is a vast amount of unused repeater capacity in Southern California and most other areas of the United States. To set aside five percent of 1.25 meters for non-repeater use will have a *de minimis* effect on the local FM communication capacity available--in times of emergency or otherwise. Granted, the Commission's action in this proceeding will displace a few repeaters that now have inputs below 222.150 MHz. According to the 1991-92 *ARRL Repeater Directory*, 13 repeaters in Southern California will be affected. But even a minimal amount of channel "re-farming" or sharing--with tone-access and/or tone-squelch procedures--will allow these repeaters to relocate to channels in the remaining 95 percent of the band that would be available for repeater use.

On the other hand, creating a small repeater-free band segment on 1.25 meters will open the way for a variety of more spectrum-efficient forms of communications--something that the Commission has often endorsed as a desirable goal in an era when all portions of the radio spectrum are becoming increasingly crowded.

CONCLUSION

Weak-signal operators and other technical experimenters have repeatedly advanced the state of the art by their work as radio amateurs. Their continued activity is clearly in the public interest, and in the best tradition of the amateur radio service. Because at least a small portion of each amateur band should be made available for this kind of activity, and

because voluntary local band planning can never prevent uncoordinated repeaters from occupying band segments set aside for other uses, we urge the Commission to adopt the proposed non-repeater subband of 222.0-222.150 MHz.

Respectfully submitted,
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